

***For immediate release***

## **MEDIA RELEASE**

**19 MAY 2015**

### **FOSTA REALISES PRODUCTIVITY GAINS THROUGH TECHNOLOGY ADOPTION**

**SINGAPORE**— Mr S Iswaran, Minister (Prime Minister’s Office), Second Minister for Home Affairs and Trade & Industry, visited local instrumentation and monitoring company, FOSTA, to witness how the company has seen productivity growth of up to 50 per cent through the adoption of a real-time, remote monitoring system developed by A\*STAR.

#### ***Internet of Things (IoT) technology solution enables prompt alerts and cuts down manual tasks***

2 FOSTA is a high tech fiber optic sensing instrumentation and monitoring company in the building and construction industry. The company monitors noise and vibrations at construction sites to ensure that they remain within safety limits. Since its inception, FOSTA has monitored more than 200 construction projects. From three staff in 2004, the company has expanded to its current staff strength of 120.

3 Previously, workers had to manually retrieve data at the construction site, and return to their office to generate reports. This posed potential safety hazard when the noise and vibration levels exceed safety limits as data collected were not timely enough to generate the required alerts.

4 In 2013, FOSTA approached A\*STAR to develop a solution for capturing data readings for vibrations and noise on-site. Through the Technology Adoption Programme (TAP), A\*STAR’s Institute for Infocomm Research (I<sup>2</sup>R) developed an IoT-based monitoring system which facilitates machine-to-machine communications over the Internet, and allows for real-time, remote access to on-site information.

5 With the system, workers are no longer required to be physically on-site, and timely reporting is achieved through the automated collection of data. With the IoT technology solution, FOSTA achieved manpower savings of nearly 90 per cent and reduced processing time by 50 per cent across its 40 worksites. FOSTA was also able to redeploy its vehicles, which were originally used to ferry workers to worksites, for

sales activities. More information on the productivity gains and technology that FOSTA adopted can be found in **Annex A**.

6 Dr Dennis Song, Managing Director of FOSTA Pte Ltd, said, “The only way to maximise profits in any industry is to minimise costs. For companies that provide services, manpower takes up a huge portion of our costs. Technology adoption aids in significantly reducing both manpower costs and processing time. This goes a long way in helping small companies like FOSTA.”

### **Developing Technology-Aided Innovation for Broader Adoption**

7 A\*STAR will further enhance the current IoT technology to allow multiple users and generate customised reports and alerts. It will be adapted into a ready-to-go (RTG) package by end of this year so that more SMEs in the construction industry can benefit from it.

8 Minister S Iswaran said, “FOSTA is an excellent example of an SME in the construction sector that has used technology to achieve productivity growth. The Technology Adoption Programme (TAP) and other similar initiatives aim to help more SMEs gain access to new technologies to innovate and improve their businesses. There has been a good response from our SMEs to TAP with a total of 1,350 technology adoptions that have benefitted more than 950 companies.”

9 Dr Tan Geok Leng, Executive Director of A\*STAR’s Science and Engineering Research Council, said, “We are pleased to announce the enhancement of the current IoT technology. The successful deployment of A\*STAR’s technology is testament to A\*STAR’s targeted strategy with SMEs and our industry partners to develop technologies that meet the needs of the industry.”

**Enclosed: Annex A – Technology adopted by FOSTA**

### **For media queries and clarifications, please contact:**

Lee Jian Hui  
Assistant Head, Corporate Communications  
Agency for Science, Technology and Research  
Tel: +65 6419 6575  
Email: [lee\\_jian\\_hui@a-star.edu.sg](mailto:lee_jian_hui@a-star.edu.sg)

Angeline Yap  
Senior Assistant Director, Corporate Communications  
Ministry of Trade & Industry  
Tel: +65 6332 7315  
Email: [angeline\\_yap@mti.gov.sg](mailto:angeline_yap@mti.gov.sg)

## **About the Agency for Science, Technology and Research (A\*STAR)**

The Agency for Science, Technology and Research (A\*STAR) is Singapore's lead public sector agency that spearheads economic oriented research to advance scientific discovery and develop innovative technology. Through open innovation, we collaborate with our partners in both the public and private sectors to benefit society.

As a Science and Technology Organisation, A\*STAR bridges the gap between academia and industry. Our research creates economic growth and jobs for Singapore, and enhances lives by contributing to societal benefits such as improving outcomes in healthcare, urban living, and sustainability.

We play a key role in nurturing and developing a diversity of talent and leaders in our Agency and Research Institutes, the wider research community and industry. A\*STAR oversees 18 biomedical sciences and physical sciences and engineering research entities primarily located in Biopolis and Fusionopolis.

For more information on A\*STAR, please visit [www.a-star.edu.sg](http://www.a-star.edu.sg)

## **About FOSTA**

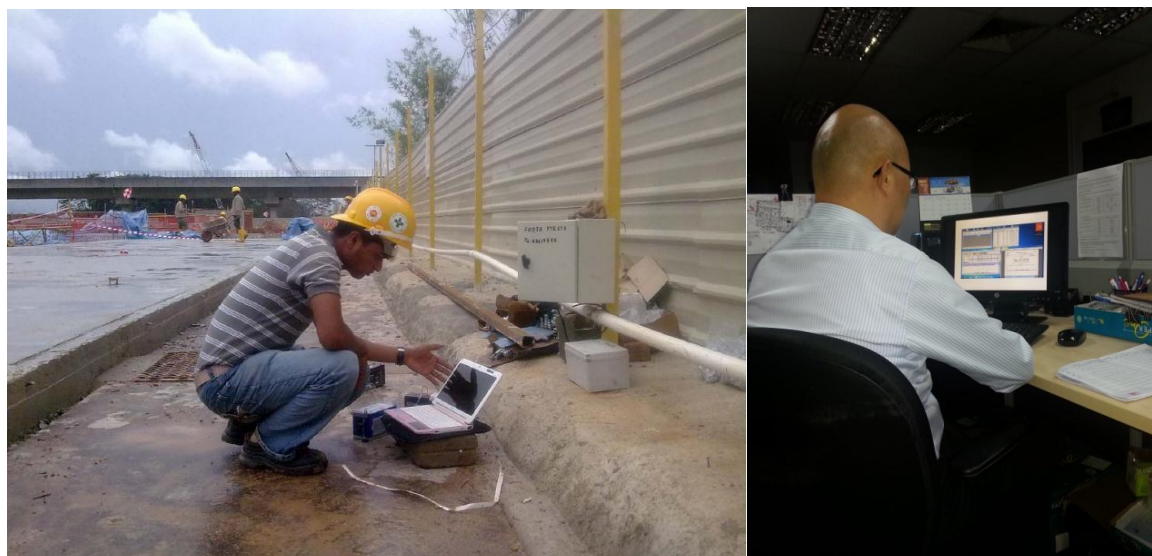
FOSTA Pte Ltd is a hi-tech fiber optic sensing instrumentation and monitoring company for building and construction industries. FOSTA's niche lies in her patented sensor technology and project implementation experience for buildings and bridges.

FOSTA focuses on four main areas namely structural health monitoring, distributed temperature sensing, and distributed temperature and strain sensing, civil and geotechnical instrumentation and monitoring, structural strengthening using the fiber reinforced polymer (FRP) wrap. FOSTA spots some 15 years of project experience and 10 years of structural strengthening experience.

**TECHNOLOGY ADOPTED BY FOSTA**

With assistance from the Technology Adoption Programme, FOSTA implemented a new remote monitoring system that allows machine-to-machine communication over the Internet. Through the use of Internet of Things (IoT) technology, the vibration data at construction sites are now transmitted wirelessly to the office. This eliminates the need for the workers to physically visit each construction site to collect data twice a week. There is also no need for workers to manually enter the data into a computer to generate reports. In addition to reducing manpower and processing time, the data are now accessible in real-time, which enable alerts to be generated to customers to correct potential hazards.

Through this initiative, IoT for remote monitoring was deployed to a total of 40 worksites and FOSTA was able to achieve manpower savings of 88 per cent and processing time was reduced by 50 per cent.



Before adopting I<sup>2</sup>R's technology, workers had to go on-site to about 40 times a week to manually retrieve data (left). After adopting the technology, workers are now able to access the data remotely from the office at regularly scheduled intervals (right).